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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,535	09/30/2005	Shen Zhao	11955/9	4427
757 7590 02/26/2008 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610				
EXAMINER NGUYEN, HANH N				
ART UNIT 2834		PAPER NUMBER		
MAIL DATE 02/26/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/551,535

**Applicant(s)**

ZHAO, SHEN

**Examiner**

HANH N. NGUYEN

**Art Unit**

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 6-15 is/are pending in the application.  
4a) Of the above claim(s) 7-14 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 2, 6 and 15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 30 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Species A, readable to claims 1, 2, 6 and 15 in the reply filed on 1/10/2008 is acknowledged.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 6,727,607) in view of Isamu (provided by the Applicant as JP 09-163708).

Regarding claim 1, Lee et al. disclose a rotary actuator comprising: a stator (101 in Fig. 8); a rotor (102); an electro-magnetic torque generating portion comprising the stator and the rotor between which electro-magnetic torque is generated by supplying an electric current to the rotor coils, which, in approximate proportion to the magnitude of the electric current, displaces a relative angle position of the rotor and the stator (Col. 5, lines 4-5); and an elastic member (coil spring 114) biased in approximate proportion to the magnitude of the relative angle displacement of the rotor and the stator and thereby generating a torque in the direction opposite to the direction of the electro-magnetic torque. Lee et al. fail to show the stator having plural permanent magnets;

a rotor having a rotor core which two salient poles are formed at, and one or more rotor coils are wound around.

However, Isamu discloses a motor structure wherein a stator having plural permanent magnets (41a, 41b in Fig. 10); a rotor (12) having a rotor core which two salient poles are formed at, and one or more rotor coils (13) are wound around for the purpose of preventing generation of inversion torque (Abstract).

Since Lee et al. and Isamu are in the same field of endeavor, the purpose disclosed by Isamu would have been recognized in the pertinent art of Lee et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Lee et al. by forming a motor structure wherein the stator having plural permanent magnets; a rotor having a rotor core which two salient poles are formed at, and one or more rotor coils are wound around as taught by Isamu for the purpose of preventing generation of inversion torque.

Regarding claim 2, Lee et al. disclose a rotary actuator comprising an elastic member (coil spring 114 in Fig. 8) driving device rotating together with the rotor (102) or the stator when the rotor or the stator rotates in a predetermined rotation direction and thereby biasing the elastic member.

Regarding claim 6, Lee et al. disclose a rotary actuator wherein the elastic member (114) is biased beforehand by applying a preload to the elastic member.

Regarding claim 15, Isamu disclose a rotary actuator wherein the permanent magnet (41b) has two circumferential end portions (41w), each of which has a non-magnetized region formed thereat.

***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1000.

HNN

February 18, 2008